

### **REMARKS / ARGUMENTS**

The present application includes pending claims 1-17, all of which have been rejected. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 1-3, 5-8, 10-13, and 15-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over USPP 2004/0131109 ("Kim") in view of USP 6088390 ("Russell"). Claims 4, 9, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim and Russell in view of U.S.P.P. 2003/0123586 ("Yen"). Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim and Russell in view of U.S.P.P. 2004/0125884 ("Wei"). The Applicant respectfully traverses these rejections at least based on the following remarks.

### **REJECTION UNDER 35 U.S.C. § 103**

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that “the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art” (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

**I. The Proposed Combination of Kim and Russell Does Not Render Claims 1-3, 5-8, 10-13, and 15-16 Unpatentable**

The Applicant now turns to the rejection of claims 1-3, 5-8, 10-13, and 15-16 as being unpatentable over Kim in view of Russell. The Applicant notes that the proposed combination of Kim and Russell forms the basis for all of the pending rejections.

**A. Independent Claims 1, 6, and 11**

With regard to the rejection of independent claim 1 under 35 U.S.C. § 103(a), the Applicant submits that the combination of Kim and Russell does not disclose or suggest at least the limitation of “removing post cursor inter-symbol interference within at least

one error correction code word in a block code based error correction scheme," as recited by the Applicant in independent claim 1.

The Office Action states the following:

1. As per claim 1, Kim et al teaches a method for equalization in a communications system, the method comprising: Decision feedback equalizer that is used for removing post cursor inter-symbol interference (See fig.1 b element 16 and abstract and paragraph [0016-0017]) in a block code based error correction scheme (see fig.1.b element 92 and paragraphs [0024] and [0046-53] and page 7, lines 27-30); *wherein said block code based error correction scheme is utilized in the communication system* (see paragraph [0010-0013]).
2. However Kim does not teach removing post cursor inter-symbol interference within at least one error correction code word in a block code.
3. Russel et al teaches a DFE for removing post cursor inter-symbol interference within at least 'one error correction code word in a block code (see fig.5 element 504 and 506 and abstract and col.1, lines 45-67 and col. 2, lines 18-40 and col. 5, lines 1-35).

See the Office Action at pages 2-3. The Applicant respectfully disagrees. The Office Action relies for support on the Abstract, FIGS. 1b and 6, and paragraphs 0016-0017, 0024, and 0046-0053 of Kim.

The Applicant points out that FIG. 6 of Kim (described at paragraphs 0024 and 0053) relates to code complementary keying (CCK) keyword estimation. FIG. 6 of Kim, or any of the remaining figures for that matter, does not relate to removing post-cursor inter-symbol interference (ISI) within an error correction code word, as recited in Applicant's claim 1. In fact, apart from the process of codeword estimation, **Kim is**

**silent with regard to any other processing (including removing of post-cursor ISI) as it relates to error correction code word in a block code based error correction scheme. In fact, the Examiner has not provided any support that Kim even relates to a block code based error correction scheme.**

The Examiner has conceded that Kim does not disclose removing post cursor inter-symbol interference within at least one error correction code word in a block code, and then relies for support on Russell. Russell discloses combining a properly designed FEC and the periodic transmission of known symbols to obtain a desired error performance in a point-to-multipoint digital transmission system employing a DFE, which induces error propagation. The Applicant has read col.1, lines 45-67, col. 2, lines 18-40, and col. 5, lines 1-35 of Russell (as well as the remainder of Russell) on numerous occasions and has been unable to identify where Russell discloses removing post cursor inter-symbol interference within at least one error correction code word in a block code, as recited in Applicant's claim 1. Even though Russell (at 504 and 506 in Fig. 5) discloses the use of a forward error correction code to correct errors in a point to multipoint digital transmission, Russell does not disclose any interference removal within the error correction codeword itself. In fact, Russell does not even disclose any processing with regard to error correction code words in block code based error correction scheme.

Accordingly, the proposed combination of Kim and Russell does not render independent claim 1 unpatentable, and a *prima facie* case of obviousness has not been

established. The Applicant submits that claim 1 is allowable. Independent claims 6 and 11 are similar in many respects to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 6 and 11 are also allowable over the references cited in the Office Action at least for the reasons stated above with regard to claim 1.

**B. Rejection of Dependent Claims 2-3, 5, 7-8, 10, 12-13, and 15-16**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 6 and 11 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, claims 2-3, 5, 7-8, 10, 12-13, and 15-16 depend from independent claims 1, 6 and 11, and are, consequently, also respectfully submitted to be allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2-3, 5, 7-8, 10, 12-13, and 15-16.

**II. Rejection of Dependent Claims 4, 9, and 14**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 6 and 11 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, since the additional cited reference (Yen) does not overcome the deficiencies of Kim and Russell, claims 4, 9,

and 14 depend from independent claims 1, 6, and 11, respectively, and are, consequently, also respectfully submitted to be allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 4, 9, and 14.

### **III. Rejection of Dependent Claim 17**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 6 and 11 under 35 U.S.C. § 103(a) has been overcome and requests that the rejection be withdrawn. Additionally, since the additional cited reference (Wei) does not overcome the deficiencies of Kim and Russell, claim 17 depends from independent claim 11, and is, consequently, also respectfully submitted to be allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claim 17.

**CONCLUSION**

Based on at least the foregoing, the Applicant believes that all claims 1-17 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and requests that the Examiner telephone the undersigned Attorney at (312) 775-8176.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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